Abstract

A process is described for preparing polyoxymethylene by
contacting a formaldehyde source with a catalyst of the formula I

$$\left[Cp_v ML_w \right]^{m+} \; Z^{n-}_{m/n} \qquad\qquad (I)$$

where

M   is Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Re, Fe, Ru, Os,
     Co, Rh or Ir,

Cp   is a cyclopentadienyl ligand $C_5H_{(5-u)}R^1_u$, where

     u   is from 0 to 5 and

     R^1 is alkyl, alkenyl, aryl, heteroaryl, aralkyl, $COOR^2$,
          COR^2, CN or NO_2, and

          R^2 is H, alkyl, aryl or aralkyl,

v   is 1 or 2,

each L is independently a nitrile, CO or a ligand
       displaceable by CO,

w   is an integer from 0 to 4,

Z   is an anion, and

m and n are each independently an integer from 1 to 3.